

Recent publications by IBM authors

The information listed here is supplied by the Institute for Scientific Information and other outside sources. Reprints of the papers may be obtained by writing directly to the first author cited. Information on books may be obtained by writing the publisher.

☛ Papers and books are listed alphabetically by author.

A

M. O. Aboelfotoh, A. Alessandrini, and F. M. d'Heurle (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Transmission Electron Microscope Study of the Initial Stage of Formation of Pd₂Si and Pt₂Si**, *Applied Physics Letters* **49**, No. 19, 1242-1244 (1986).

K. Y. Ahn, S. B. Brodsky, C. Y. Ting, and J. Kim (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Properties of Reactively Sputtered Tungsten Films in Nitrogen and Oxygen**, *Journal of Vacuum Science and Technology A* **4**, No. 6, 3111-3116 (1986).

K. B. Albaugh (IBM Corporation, P.O. Box A, Essex Junction, VT 05452), **Irreversibility of Anodic Bonding**, *Materials Letters* **4**, No. 11, 12, 465-469 (1986).

D. L. Allara (Bell Communications Research, 600 Mountain Avenue, Murray Hill, NJ 07974), F. M. Fowkes (Lehigh University, Bethlehem, PA), J. Noolandi (Xerox Research Center of Canada, Mississauga, Ontario), G. W. Rubloff (IBM, Yorktown Heights, NY), and M. V. Tirell (University of Minnesota, Minneapolis, MN), **Bonding and Adhesion of Polymer Interfaces**, *Materials Science and Engineering* **83**, No. 2, 213-226 (1986).

B. Arnett and L. Tyson (IBM Europe, La Hulpe, Belgium), **Continuing Training Education in Europe: Cooperation on the Rise**, *Training and Development Journal* **40**, No. 11, 78-80 (1986).

T. C. Arnoldussen (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Thin-Film Recording Media**, *Proceedings of the IEEE* **74**, No. 11, 1526-1539 (1986).

D. Arvanitis, U. Dobler, L. Wenzel, K. Baberschke (Free University of Berlin, D-1000 Berlin 33, Federal Republic of Germany), and J. Stohr (IBM, San Jose, CA), **Position of the Σ-Shape and Π-Resonances of C₂H₂, C₂H₄ and C₂H₆ on Cu(100) at 60 K: A NEXAFS Study**, *Surface Science* **178**, No. 1-3, 686-692 (1986).

B

R. Badii, T. Schneider, and M. P. Soerense (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Langevin Simulations of Quantum Systems**, *Physical Review B* **35**, No. 1, 297-304 (1987).

P. S. Bagus (IBM Corporation, 650 Harry Road, San Jose, CA 95120), C. J. Nelin (Analatom, Inc., Sunnyvale, CA), I. P. Batra (IBM, San Jose, CA), and C. W. Bauschlicher, Jr. (Ames Research Center, Moffett Field, CA), **Scattering of Helium from O/Ni(001): Cluster-Model Studies**, *Physical Review B* **35**, No. 2, 441-451 (1987).

P. S. Bagus (IBM Corporation, 650 Harry Road, San Jose, CA 95120), C. J. Nelin, and K. Hermann (Analatom, Inc., Sunnyvale, CA), **The Analysis and Understanding of Ionization Phenomena: Ab Initio Molecular Wavefunctions**, *Australian Journal of Physics* **39**, No. 5, 731-747 (1986).

H. J. Ball (British Broadcasting Corporation, Buckinghamshire MK7 6BH, England), R. R. Moore (The Open University, Milton Keynes, England), and P. Quarendo (IBM UK Scientific Centre, Winchester), **Exploring New Worlds: Computer Animation in Education**, *Perspectives in Computing* **6**, No. 2, 34-43 (1986).

E. R. Barnes (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Variation on Karmarkar Algorithm for Solving Linear Programming Problems**, *Mathematical Programming* **36**, No. 2, 174-182 (1986).

I. P. Batra (IBM Corporation, 650 Harry Road, San Jose, CA 95120), C. Ciraci, G. P. Srivastava, J. S. Nelson, and C. Y. Fong (IBM, Rüschlikon, Switzerland), **Dimensionality and Size Effects in Simple Metals**, *Physical Review B* **34**, No. 12, 8246-8257 (1986).

P. E. Batson (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), K. L. Kavanagh (Cornell University, Ithaca, NY), J. M. Woodall (IBM, Yorktown Heights, NY), and J. W. Mayer (Cornell University, Ithaca, NY), **Electron-Energy-Loss Scattering Near a Single Misfit Dislocation at the GaAs/GaNAs Interface**, *Physical Review Letters* **57**, No. 21, 2729-2732 (1986).

H. Baumeler, R. F. Kiefl, H. Keller, W. Kundig, W. Odermatt, B. D. Patterson, J. W. Schneider (University of Zurich, Schonberggasse 9, CH-8001 Zurich, Switzerland), T. L. Estle, S. P. Rudaz, D. P. Spencer (Rice University, Houston, TX), K. W. Blazey (IBM, Yorktown Heights, NY), and I. M. Savic (FAC Natural &

Mathematical Science, Belgrade, Yugoslavia), **Muonium Centers in the Alkali Halides**, *Hyperfine Interactions* **32**, No. 1-4, 659-665 (1986).

A. E. Bell (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Optical Data Storage**, *Applied Optics* **25**, No. 22, 3985 (1986).

R. Benzi (IBM Italy, Via Giorgione 159, I-00147 Rome, Italy), G. Paladin (University of Rome, Italy), S. Patarnello (IBM Italy, Rome), P. Santangelo, and A. Vulpiani (University of Rome, Italy), **Intermittency and Coherent Structures in Two-Dimensional Turbulence**, *Journal of Physics A* **19**, No. 18, 3771-3784 (1986).

M. Bhattacharya (Indian Institute of Technology, New Delhi 11016, India), R. C. Agarwal (IBM, Yorktown Heights, NY), and S. C. D. Roy (Indian Institute of Technology, New Delhi, India), **Bandpass and Bandstop Recursive Filters with Low Sensitivity**, *IEEE Transactions on Acoustics, Speech, and Signal Processing ASSP-34*, No. 6, 1485-1492 (1986).

A. Black, N. Hutchinson, E. Jul, H. Levy (University of Washington, Seattle, WA 98195), and L. Carter (IBM, Yorktown Heights, NY), **Distribution and Abstract Types in Emerald**, *IEEE Transactions on Software Engineering SE-13*, No. 1, 65-76 (1987).

M. Blaum (IBM Corporation, 650 Harry Road, San Jose, CA 95120), P. G. Farrell (University of Manchester, England), and H. C. van Tilborg (Eindhoven University of Technology, The Netherlands), **A Class of Burst Error-Correcting Array Codes**, *IEEE Transactions on Information Theory IT-32*, No. 6, 836-839 (1986).

L. Blum (University of Puerto Rico, College of Natural Science, P.O.B. AT, Rio Piedras, PR 00931), H. D. Abruna (Cornell University, Ithaca, NY), J. White, J. G. Gordon, G. L. Borges, M. G. Samant, and O. Melroy (IBM, San Jose, CA), **Study of Underpotentially Deposited Copper on Gold by Fluorescence Detected Surface EXAFS**, *Journal of Chemical Physics* **85**, No. 11, 6732-6738 (1986).

F. C. Bos and D. M. Burland (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Hole Transport in Polyvinylcarbazole: The Vital Importance of Excitation-Light Intensity**, *Physical Review Letters* **58**, No. 2, 152-155 (1987).

R. M. Bradley, J. M. E. Harper, and D. A. Smith (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Theory of Thin-Film Orientation by Ion Bombardment During Deposition**, *Journal of Applied Physics* **60**, No. 12, 4160-4164 (1986).

N. Braslau (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Contact and Metallization Problems in GaAs Integrated Circuits**, *Journal of Vacuum Science and Technology A* **4**, No. 6, 3085-3090 (1986).

J. L. Brédas (Universitaires Notre-Dame de la Paix, rue de Bruxelles 61, B-5000 Namur, Belgium) and T. C. Clarke (IBM, San Jose, CA), **Electronic Structure of Polyimide**, *Journal of Chemical Physics* **86**, No. 1, 253-257 (1986).

R. A. Bubeck, J. A. Blazy (Dow Chemical Company, Midland, MI 48674), E. J. Kramer, D. J. Buckley (Cornell University, Ithaca, NY), and H. R. Brown (IBM, San Jose, CA), **Real-Time Small-Angle X-Ray Scattering Measurements of High-Impact Polystyrene During Tensile Impact as a Function of Deformation Rate**, *Polymer Communications* **27**, No. 12, 357-360 (1986).

J. M. Burrige and S. J. P. Todd (IBM United Kingdom Ltd., Winchester SO23 9DR, Hants, England), **Protein Secondary Structural Representations Using Real-Time Interactive Computer Graphics**, *Journal of Molecular Graphics* **4**, No. 4, 220+ (1986).

C

G. Calzolari (IBM Italy, Scientific Center, Via S. Maria 67, 56100 Pisa, Italy) and F. P. Sterbenz (University of Wyoming, Laramie), **Control Variates to Estimate the Reduced Form Variances in Econometric Models**, *Econometrica* **54**, No. 6, 1483-1490 (1986).

C.-A. Chang and A. Segmüller (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **PtSi Contact Metallurgy Formed by Three-Temperature Annealing Sequences and Short Annealing Time**, *Journal of Applied Physics* **61**, No. 1, 201-205 (1987).

C.-A. Chang and H. L. Yeh (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Ambient Dependence of Metal Diffusion Through a Less-Electronegative Metal Layer**, *Applied Physics Letters* **49**, No. 19, 1233-1235 (1986).

C. L. Chen (IBM Corporation, P.O. Box 390, Poughkeepsie, NY 12602), **Linear Dependencies in Linear Feedback Shift Registers**, *IEEE Transactions on Computers C-35*, No. 12, 1086-1088 (1986).

M. Y. Choi (University of California, Los Angeles, CA 90024), P. M. Chaikin (University of Pennsylvania, Philadelphia), and R. L. Greene (IBM, San Jose, CA), **Thermal Conductivity of Bis-Tetramethyltetraselenafulvalene Perchlorate [(TMTSF)₂ClO₄]**, *Physical Review B* **34**, No. 11, 7727-7732 (1986).

T. C. Chou, C. Y. Wong, and K. N. Tu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Enhanced Grain Growth of Phosphorus Doped Polycrystalline Silicon by Titanium Silicide Formation**, *Applied Physics Letters* **49**, No. 20, 1381-1383 (1986).

I. Cidon, J. M. Jaffe, and M. Sidi (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Local Distribution Deadlock Detection by Cycle Detection and Clustering**, *IEEE Transactions on Software Engineering SE-13*, No. 1, 3-14 (1987).

S. Ciraci (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and I. P. Batra (IBM, Zurich, Switzerland), **Theory of Transition from the Dihydride to the Monohydride Phase on the Si(001) Surface**, *Surface Science* **178**, Nos. 1-3, 80-89 (1986).

L. M. Claessen, J. C. Maan, M. Altarelli, P. Wyder (Max-Planck Institut für Festkörperforschung, F-38042 Grenoble, France), L. L. Chang, and L. Esaki (IBM, Yorktown Heights, NY), **Pressure Dependence of Band Offsets in an InAs-GaSb Superlattice**, *Physical Review Letters* **57**, No. 20, 2556-2559 (1986).

D. R. Clarke (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and D. Wolf (Argonne National Laboratory, Argonne, IL), **Grain Boundaries in Ceramics and at Ceramic-Metal Interfaces**, *Materials Science and Engineering* **83**, No. 2, 197-204 (1986).

H. Coufal and P. Hefferle (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Pulsed Method for Thermal Diffusivity Measurements of Polymer Films with Submicrometer Thickness**, *Canadian Journal of Physics* **64**, No. 9, 1200-1203 (1986).

E. Courtens (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), J. Pelous, J. Phalippou, R. Vacher, and T. Woignier (Université des Sciences et Technique du Languedoc, Montpellier, France), **Brillouin-Scattering Measurements of Phonon-Fractal Crossover in Silica Aerogels**, *Physical Review Letters* **58**, No. 2, 128-131 (1987).

R. A. Cowley, T. W. Ryan (University of Edinburgh, Edinburgh EH9-3JZ, Midlothian, Scotland), and E. Courtens (IBM, Zurich, Switzerland), **The Structure of the Glass Phase of $\text{Rb}_{1-x}(\text{ND}_4)_x\text{D}_2\text{PO}_4$** , *Zeitschrift für Physik B* **65**, No. 2, 181-192 (1986).

D

D. J. DeFrees (Molecular Research Institute, 701 Welch Road, Palo Alto, CA 94304) and A. D. McLean (IBM, San Jose, CA), **A Priori Predictions of the Rotational Constants for Protonated Formaldehyde and Protonated Methanol**, *Chemical Physics Letters* **131**, No. 4, 5, 403-408 (1986).

D. Deringer, D. Brandin, D. Fletcher, and N. Jacobstein (IBM Corporation, 900 King Street, Rye Brook, NY 10573), **The Report of the Long Range Planning Committee: A Summary**, *Communications of the ACM* **29**, No. 11, 1061-1071 (1986).

D. J. DiMaria, M. V. Fischetti, J. Batey, L. Dori, E. Tierney, and J. Stasiak (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Direct Observation of Ballistic Electrons in Silicon Dioxide**, *Physical Review Letters* **57**, No. 25, 3213-3216 (1986).

N. J. Dinardo, J. E. Demuth, and T. C. Clarke (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electron Vibrational Spectroscopy of Thin Polyimide Films**, *Journal of Chemical Physics* **85**, No. 11, 6739-6749 (1986).

R. W. Dreyfus, J. M. Jasinski (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), G. S. Selwyn (IBM, Hopewell Junction, NY), and R. E. Walkup (IBM, Yorktown Heights, NY), **Laser Spectroscopy in Electronic Materials Processing Research**, *Laser Focus, Electro-Optics Technology* **22**, No. 12, 62-72 (1986).

R. W. Dreyfus, R. Kelly, and R. E. Walkup (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Laser-Induced Fluorescence Studies of Excimer Laser Ablation of Al_2O_3** , *Applied Physics Letters* **49**, No. 21, 1478-1480 (1986).

R. W. Dreyfus, R. E. Walkup, and R. Kelly (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Laser Sputtering—Part IV: Laser Interferometry and Laser-Induced Fluorescence Studies of Insulators**, *Radiation Effects* **99**, Nos. 1-4, 199-211 (1986).

W. Drube, D. Straub, F. J. Himpsel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), P. Soukiassian (University of Wisconsin, Stoughton), C. L. Fu, and A. J. Freeman (Northwestern University, Evanston, IL), **Unoccupied Surface States on W(001) and Mo(001) by Inverse Photoemission**, *Physical Review B* **34**, No. 12, 8989-8992 (1986).

E

J. A. Edosomwan (IBM Corporation, P.O. Box 390, Poughkeepsie, NY 12602), **A Program for Managing Productivity and Quality**, *Industrial Engineering* **19**, No. 1, 64-68 (1987).

R. M. Edwards, J. Lebedzik (Lemont Science Inc., 2011 Pine Hall Drive, State College, PA 16801), and G. Stone (IBM, San Jose, CA), **Fully Automated SEM Image Analysis**, *Scanning* **8**, No. 5, 221-231 (1986).

B. G. Elmegreen and D. M. Elmegreen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Do Density Waves Trigger Star Formation?**, *Astrophysical Journal* **311**, No. 2, 554-562 (1986).

H. L. Evans, X. Wu, E. S. Yang (Columbia University, New York, NY 10027), and P. S. Ho (IBM, Yorktown Heights, NY), **Measurement of Interface States in Palladium Silicon Diodes**, *Journal of Applied Physics* **60**, No. 10, 3611-3615 (1986).

F

P. J. Flory and P. Navard (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Optical Anisotropies of Alkylcyanobiphenyls, Alkoxycyanobiphenyls and Related Compounds**, *Journal of the Chemical Society, Faraday Transactions I* **82**, No. 11, 3381-3390 (1986).

V. Foglietti, W. J. Gallagher, M. B. Ketchen, A. W. Kleinsasser, R. H. Koch, S. I. Raider, and R. L. Sandstrom (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Low-frequency Noise in Low $1/f$ Noise dc SQUID's**, *Applied Physics Letters* **49**, No. 20, 1393-1395 (1986).

K. Fordyce, P. Norden, and G. Sullivan (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Artificial Intelligence and the Management Science Practitioner: Expert Systems—Getting a Handle on a Moving Target**, *Interfaces* **16**, No. 6, 61-63 (1986).

A. R. Forouhi (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and I. Bloomer (San Jose State University, CA), **Optical Dispersion Relations for Amorphous Semiconductors and Amorphous Dielectrics**, *Physical Review B* **34**, No. 10, 7018-7026 (1986).

G

S. Gal (IBM, Israel, Scientific Center, Haifa, Israel), **Computing Elementary Functions: A New Approach for Achieving High Accuracy and Good Performance**, *Lecture Notes in Computer Science* **235**, 1-16 (1986).

K. M. Gardiner (IBM Corporation, 500 Columbus Avenue, Thornwood, NY 10594), **All Is Not as It Seems**, *Manufacturing Engineering* **97**, No. 6, 10 (1986).

Y. Gefen, W.-H. Shih (University of Washington, Seattle, WA 98195), R. B. Laibowitz, and J. M. Viggiano (IBM, Yorktown Heights, NY), **Nonlinear Behavior Near the Percolation Metal-Insulator-Transition**, *Physical Review Letters* **57**, No. 24, 3097-3100 (1986).

J. H. Glowina, J. Misewich, and P. P. Sorokin (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Ultrafast Ultraviolet Pump-Probe Apparatus**, *Journal of the Optical Society of America B* **3**, No. 11, 1573-1579 (1986).

R. L. Greene (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), S. S. P. Parkin (IBM, San Jose, CA), and H. Schwenk (W. Meissner Institut für Tieftemperaturforschung, Garching, Federal Republic of Germany), **Quantum Oscillations and Field-Induced Transitions in (TMTSF)₂ReO₄**, *Physica B&C* **143**, No. 1-3, 388-392 (1986).

C. Greengard (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Convergence of the Vortex Filament Method**, *Mathematics of Computation* **47**, No. 176, 387-398 (1986).

A. Grinvald (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), E. Lieke, R. D. Frostig, C. D. Gilbert, and T. N. Wiesel (Rockefeller University, New York, NY), **Functional Architecture of Cortex Revealed by Optical Imaging of Intrinsic Signals**, *Nature* **324**, No. 6095, 361-364 (1986).

R. K. Grygier, W. Knoll, and H. Coufal (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Detection of Plasmon Surface Polaritons on Periodic Silver Gratings with a Pyroelectric Calorimeter**, *Canadian Journal of Physics* **64**, No. 9, 1067-1069 (1986).

D. Guidotti (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and T. A. Driscoll (Lockheed Research, Palo Alto, CA), **Second-Harmonic Generation in Centro-Symmetric Semiconductors**, *Il Nuovo Cimento Della Società Italiana di Fisica D* **8**, No. 4, 385-416 (1986).

H

D. Hagmann, D. Steiner, and T. Schellinger (IBM Germany, D-7030 Boeblingen, Federal Republic of Germany), **A Method to Impede the Formation of Crystal Defects after High Dose Arsenic Implants**, *Journal of the Electrochemical Society* **133**, No. 12, 2597-2600 (1986).

B. Hälg (Eidgenössische Technische Hochschule Zürich, 5303 Würenlingen, Switzerland), W. Berlinger, and K. A. Müller (IBM, Zurich, Switzerland), **Uniaxial Pressure Device for Neutron Scattering Experiments**, *Nuclear Instruments and Methods in Physics Research A* **253**, No. 1, 61-64 (1986).

S. Y. Han (IBM Corporation, Neighborhood Road, Kingston, NY 12401) and S. Sahni (University of Minnesota, Minneapolis), **Layering Algorithms for Single-Row Routing**, *IEEE Transactions on Computer-aided Design of Integrated Circuits and Systems CAD-6*, No. 1, 95-102 (1987).

L. J. Hannigan (IBM Corporation, P.O. Box 390, Poughkeepsie, NY 12602), **Role of the Occupational Health Nurse in Working with Troubled Employees**, *Occupational Medicine* **1**, No. 4, 667-672 (1986).

L. Hannon (IBM Corporation, Neighborhood Road, Kingston, NY 12401) and W. Horsthem (The University of Texas, Austin), **Stirring Effects and Bistability in the Iodate-Arsenous Acid Reaction: Premixed vs Segregated Flow**, *Journal of Chemical Physics* **86**, No. 1, 140-143 (1986).

L. Hannon, G. C. Lie, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Molecular Dynamics Simulation of Channel Flow**, *Physics Letters A* **119**, No. 4, 174-177 (1986).

K. Hara (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and F. C. Moon (Cornell University, Ithaca, NY), **Stability and Vibration of Internal Windings of Superconducting Solenoid Magnets**, *Fusion Technology* **10**, No. 3, 1548-1553 (1986).

A. Hartman (IBM Israel Scientific Center, Technion City, Haifa, Israel), **Partial Triple Systems and Edge Colorings**, *Discrete Mathematics* **62**, No. 2, 183-196 (1986).

A. Hartman (IBM Israel, Scientific Center, IL-32000 Haifa, Israel) and E. Mendelson (Technion-Israel Institute of Technology, Haifa), **The Last of the Triple Systems**, *ARS Combinatoria* **22**, 25-41 (1986).

P. Hedegard and A. O. Caldeira (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Static Properties of a Particle Coupled to a Fermionic Environment**, *Physical Review B* **35**, No. 1, 106-114 (1987).

D. Heitmann (Institut für Angewandte Physics, Jungiusstrasse 11, D-2000 Hamburg 36, Federal Republic of Germany), M. Ziesmann (Max-Planck Institut für Festkörperforschung, Stuttgart, Federal Republic of Germany), and L. L. Chang (IBM, Yorktown Heights, NY), **Cyclotron Resonance Oscillations in InAs Quantum Wells**, *Physical Review B* **34**, No. 10, 7463-7466 (1986).

K. Hofmann, G. W. Rubloff, and R. A. McCorkle (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Defect Formation in Thermal SiO₂ by High Temperature Annealing**, *Applied Physics Letters* **49**, No. 22, 1525-1527 (1986).

F. A. Houle (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Basic Mechanisms in Laser Etching and Deposition**, *Applied Physics A* **41**, No. 4, 315-330 (1986).

F. A. Houle, R. J. Wilson, and T. H. Baum (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Surface Processes Leading to Carbon Contamination of Photochemically Deposited Copper Films**, *Journal of Vacuum Science and Technology A* **4**, No. 6, 2452-2458 (1986).

J. K. Howard (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Effect of Nucleation Layers on the Growth and Magnetic Properties of CoCr and CoCr-x Films**, *Journal of Vacuum Science and Technology A*, **4**, No. 6, 2975-2987 (1986).

H. C. W. Huang (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), P. Chaudhar, C. J. Kircher, and M. Murakami (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Hillock Growth Kinetics in Thin Pb in Au Films**, *Philosophical Magazine A* **54**, No. 4, 583-599 (1986).

I. Hussla, H. Coufal, F. Trager, and T. J. Chuang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Surface Temperature Measurement During Pulsed Laser Induced Thermal Desorption of Xenon from a Copper Film**, *Canadian Journal of Physics* **64**, No. 9, 1070-1073 (1986).

I

M. Ioka and M. Koda (IBM Japan Ltd., 36 Kowa Building, 5-19 Sanban-cho, Chiyoda-ku, Tokyo 102, Japan), **Performance of Landsat-5TM Data in Land Cover Classification**, *International Journal of Remote Sensing* **7**, No. 12, 1715-1728 (1986).

R. D. Isaac, J. T. Economos, M. B. Marton, F. A. Sewell (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and M. W. Lynch (IBM, Essex Junction, VT), **Technical Trade-Off Issues in Clean Room Design**, *Solid State Technology* **29**, No. 12, 53-58 (1986).

J

J. M. Jasinski, B. S. Meyerson, and T. N. Nguyen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Excimer Laser-Induced Deposition of Silicone Nitride Thin Films**, *Journal of Applied Physics* **61**, No. 1, 431-433 (1987).

O. Jones (IBM Corporation, East Fishkill facility, Hopewell Junction, NY 12533), **VMEbus Primer**, *Electronics & Wireless World* **92**, No. 1610, 8-14 (1986).

K

A. J. Kaminer (IBM Corporation, 1000 Westchester Avenue, White Plains, NY 10604), **Role of the Medical Department**, *Occupational Medicine* **1**, No. 4, 541-548 (1986).

J. Karat (IBM Corporation, Austin, TX 78758), J. E. McDonald, and M. Anderson (New Mexico State University, Las Cruces), **A Comparison of Menu Selection Techniques: Touch Panel, Mouse and Keyboard**, *International Journal of Man-Machine Studies* **25**, No. 1, 73-88 (1986).

J. H. Kaufman, O. R. Melroy, F. F. Abraham, and A. I. Nazzari (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Growth Instability in Diffusion Controlled Polymerization**, *Solid State Communications* **60**, No. 9, 757-761 (1986).

K. Kemnitz, K. Bhattacharyya, J. M. Hicks, G. R. Pinto, K. B. Eisenthal (Columbia University, New York, NY 10027), and T. F. Heinz (IBM, Yorktown Heights, NY), **The Phase of Second-Harmonic Light Generated at an Interface and Its Relation to Absolute Molecular Orientation**, *Chemical Physics Letters* **131**, No. 4, 5, 285-290 (1986).

K. M. Kim (IBM Corporation, East Fishkill facility, Hopewell Junction, NY 12533) and W. E. Langlois (IBM, San Jose, CA), **Computer Simulation of Boron Transport in Magnetic Czochralski Growth of Silicon**, *Journal of the Electrochemical Society* **133**, No. 12, 2586-2590 (1986).

K. S. Kim, M. Dupuis, G. C. Lie, and E. Clementi (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Revisiting Small Clusters of Water Molecules**, *Chemical Physics Letters* **131**, No. 6, 451-456 (1986).

A. W. Kleinsasser, T. N. Jackson, G. D. Pettit, H. Schmid, J. M. Woodall, and D. P. Kern (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Normal InAs/GaAs Heterostructure Superconducting Weak Links with Nb Electrodes**, *Applied Physics Letters* **49**, No. 25, 1741-1743 (1986).

K. A. Klingensmith (IBM Corporation, 650 Harry Road, San Jose, CA 95120), J. W. Downing, R. D. Miller, and J. Michl (University of Utah, Salt Lake City), **Electronic Excitation in Poly(di-normal-hexylsilane)**, *Journal of the American Chemical Society* **108**, No. 23, 7438-7439 (1986).

S. H. Koenig and R. D. Brown (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Relaxometry of Paramagnetic Ions in Tissue**, *Metal Ions in Biological Systems* **21**, 229-270 (1987).

L. Krusin-Elbaum, K. Ahn, J. H. Souk, C. Y. Ting (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and L. A. Nesbit (IBM, Essex Junction, VT), **Effects of Deposition Methods on the Temperature-Dependent Resistivity of Tungsten Films**, *Journal of Vacuum Science and Technology A* **4**, No. 6, 3106-3110 (1986).

L. Krusin-Elbaum, J. Y.-C. Sun, and C.-Y. Ting (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **On the Resistivity of TiSi₂: The Implication for Low-Temperature Applications**, *IEEE Transactions on Electron Devices* **ED-34**, No. 1, 58-63 (1987).

H. Kuzmany (Vienna University, A-1010 Vienna, Austria), J. F. Rabolt, B. L. Farmer, and R. D. Miller (IBM, San Jose, CA), **Studies of Chain Conformational Kinetics in Poly(Di-Normal-Alkylsilanes) by Spectroscopic Methods II. Conformation and Packing of Poly(Di-Normal-Hexylsilane)**, *Journal of Chemical Physics* **85**, No. 12, 7413-7422 (1986).

L

A. Laaksonen (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Computer Simulation Package for Liquids and Solids with Polar Interactions I. McMillan/H₂O: Aqueous Systems**, *Computer Physics Communications* **42**, No. 2, 271-300 (1986).

J. W. Labadie, S. A. MacDonald, and C. G. Willson (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Poly(Alkylstannanes): A New Class of Main Chain Organotin Polymers**, *Polymer Bulletin* **16**, No. 5, 427-431 (1986).

N. D. Lang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Apparent Size of an Atom in the Scanning Tunneling Microscope as a Function of Bias**, *Physical Review Letters* **58**, No. 1, 45-48 (1987).

G. G. Langdon (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Self Assessment Procedure XVI. A Self Assessment Procedure Dealing with Computer Organization and Logic Design**, *Communications of the ACM* **29**, No. 11, 1051-1060 (1986).

G. G. Langdon, Jr. (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Comment on "A Universal Data Compression System"**, *IEEE Transactions on Information Theory* **IT-32**, No. 6, 857 (1986).

W. Y. Lee, H. Coufal, C. R. Davis, V. Jipson, G. Lim, W. Parrish, F. Sequeda (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and R. E. Davis (IBM, San Jose, CA), **Nanosecond Pulsed Laser-Induced Segregation of Te in TeO₂ Films**, *Journal of Vacuum Science and Technology A* **4**, No. 6, 2988-2992 (1986).

L. Lerer (Technion-Israel Institute of Technology, IL-32000 Haifa, Israel) and M. Tismenetsky (IBM, Haifa, Israel), **Generalized Bezoutian and the Inversion Problem for Block Matrices I. General Scheme**, *Integral Equations and Operator Theory* **9**, No. 6, 790-819 (1986).

M. D. Levenson, R. M. Shelby, M. Reid, and D. F. Walls (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Quantum Nondemolition Detection of Optical Quadrature Amplitudes**, *Physical Review Letters* **57**, No. 20, 2473-2476 (1986).

J. R. T. Lewis (IBM United Kingdom Scientific Centre, Athelstan House, 2-5 St. Clement Street, Winchester, Hants SO23 9HE, England) and T. Sopwith (Brompton Hospital, London, England), **Measuring the Human Chest with Structured Lighting**, *Pattern Recognition Letters* **4**, No. 5, 359-366 (1986).

J. R. T. Lewis (IBM United Kingdom Scientific Centre, Athelstan House, 2-5 St. Clement Street, Winchester, Hants SO23 9HE, England) and T. Sopwith (Brompton Hospital, London, England), **Three-Dimensional Surface Measurement by Microcomputer**, *Image and Vision Computing* **4**, No. 3, 159-166 (1986).

H. W. Li, M. A. Lavin, and R. J. Lemaster (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Fast Hough Transform: A Hierarchical Approach**, *Computer Vision, Graphics, and Image Processing* **36**, No. 2/3, 139-161 (1986).

G. C. Lie (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Consistency Check for Radial Distribution Functions of Water**, *Journal of Chemical Physics* **85**, No. 12, 7495-7497 (1986).

M. Liehr (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), P. A. Thiry, J. J. Pireaux, and R. Caudano (Faculté Universitaires Notre-Dame, Namur, Belgium), **CaF₂/Si(111): Thin Film Characterization by High Resolution Electron Energy Loss Spectroscopy**, *Physical Review B* **34**, No. 10, 7471-7474 (1986).

T. Lincoln (IBM United Kingdom Ltd., 389 Chiswick High Road, London W4 4AL, England), **Do Computer Systems Really Pay Off?**, *Information and Management* **11**, No. 1, 25-34 (1986).

R. Linsker (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **From Basic Network Principles to Neural Architecture: Emergence of Orientation Columns**, *Proceedings of the National Academy of Sciences of the United States of America* **83**, No. 22, 8779-8783 (1986).

M

T. Majima (Chiba University, 1-33 Yayoicho, Chiba, Japan), M. Anzai, and H. Nakazawa (IBM Japan Ltd., Minato-ku, Tokyo, Japan), **Notch Tensile Strength of Ductile Materials**, *Bulletin of the JSME, Japan Society of Mechanical Engineers* **29**, No. 258, 4000-4004 (1986).

J. Marek, A. G. Elliot (Hewlett-Packard Company, San Jose, CA 95131), V. Wilke (Carl Zeiss, Oberkochen, Federal Republic of Germany), and R. Geiss (IBM, San Jose, CA), **High Resolution Scanning Photoluminescence Characterization of Semi-Insulating GaAs Using a Laser Scanning Microscope**, *Applied Physics Letters* **49**, No. 25, 1732-1734 (1986).

G. Margaritondo (Synchrotron Radiation Center, 3725 Schneider Drive, Stoughton, WI 53589), L. J. Brillson (Xerox Webster Research Center, Webster, NY), V. Brusci (IBM, Yorktown Heights, NY), J. R. Chelikowsky (Exxon Research and Engineering Company, Annandale, NJ), R. W. Grant (Rockwell International Corporation, Thousand Oaks, CA), and G. W. Rubloff (IBM Yorktown Heights, NY), **Semiconductor Interfaces**, *Materials Science and Engineering* **83**, No. 2, 227-237 (1986).

C. Mauduit (IBM France, 75116 Paris, France), **Unispectral Morphisms**, *Theoretical Computer Science* **46**, No. 1, 1-11 (1986).

M. C. McCord (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), V. Dahl (Simon Fraser University, Burnaby, Canada), and H. Abramson (University of British Columbia, Vancouver, Canada), **Natural Language and Logic Programming: Introduction**, *Journal of Logic Programming* **3**, No. 4, 277-278 (1986).

J. F. McDonald, A. J. Steckl (Rensselaer Polytechnic Institute, Troy, NY 12181), C. A. Neugebaum, R. O. Carlson (General Electric Corp., Schenectady, NY), and A. S. Bergendahl (IBM, Essex Junction, VT), **Multilevel Interconnections for Wafer Scale Integration**, *Journal of Vacuum Science and Technology A* **4**, No. 6, 3127-3138 (1986).

O. Melroy, K. Kanazawa, J. G. Gordon, and D. Buttry (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Direct Determination of the Mass of an Underpotentially Deposited Monolayer of Lead on Gold**, *Langmuir* **2**, No. 6, 697-700 (1986).

C. Mendoza (IBM Venezuela, Scientific Center, Caracas 1010, Venezuela), **Recent Developments in the Field of Atomic Data for Astrophysics**, *Publications of the Astronomical Society of the Pacific* **98**, No. 608, 999-1001 (1986).

B. S. Meyerson, F. K. LeGoues, T. N. Nguyen, and D. L. Hareme (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Nonequilibrium Boron Doping Effects in Low-Temperature Epitaxial Silicon Films**, *Applied Physics Letters* **50**, No. 2, 113-115 (1987).

R. D. Miller and R. Sooriyakumaran (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Soluble Alkyl Substituted Polygermanes: Thermochromic Behavior**, *Journal of Polymer Science, Polymer Chemistry* **25**, No. 1, 111-125 (1987).

W. L. Miranker, M. Mascagni (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and S. Rump (IBM Germany, Boeblingen), **Case Studies for Augmented Floating Point Arithmetic**, *Lecture Notes in Computer Science* **235**, 86-118 (1986).

K. A. Müller, W. Berlinger, K. W. Blazey (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), and J. Albers (Universität des Saarlandes, Saarbrücken, Federal Republic of Germany), **Electron Paramagnetic Resonance of Mn⁴⁺ in BaTiO₃**, *Solid State Communications* **61**, No. 1, 21-25 (1987).

P. Murali (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **GaAs pn Junction Studied by Scanning Tunneling Potentiometry**, *Applied Physics Letters* **49**, No. 21, 1441-1443 (1986).

P. D. Murphy (IBM Instruments, Orchard Park, Danbury, CT 06810), **Pulse Sequence to Minimize Artifacts from Long Radiofrequency Pulses in CP/MAS NMR**, *Journal of Magnetic Resonance* **70**, No. 2, 307-309 (1986).

N

D. G. Naugle, R. Delgado, H. Armbruster, C. L. Tsai (Texas A&M University, College State, TX 77843), T. O. Callaway (Northeastern University, Boston, MA), D. Reynolds (Stephen F. Austin State University, Nacogdoches, TX), and V. L. Moruzzi (IBM, Yorktown Heights, NY), **Electron Transport in Calcium Based Metallic Glasses**, *Physical Review B* **34**, No. 12, 8279-8287 (1986).

P. Navard and P. J. Flory (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Optical Anisotropies of Alkylcyanobicyclohexyls and Related Compounds**, *Journal of the Chemical Society, Faraday Transactions I* **82**, No. 11, 3367-3380 (1986).

C. A. Neff and R. Nair (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Ranking Algorithm for MOS Circuit Layouts**, *IEEE Transactions on Computer-aided Design of Integrated Circuits and Systems* **CAD-6**, No. 1, 17-21 (1987).

D. J. Newman (Temple University, Philadelphia, PA 19122) and T. J. Rivlin (IBM, Yorktown Heights, NY), **A Continuous Function Whose Divided Differences at the Tschebyscheff Extrema Are All Zero**, *Constructive Approximation* **2**, No. 3, 221-223 (1986).

J. M. Nicholls, F. Salvan, and B. Reihl (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Inverse Photoemission Study of Ordered Cu, Ag, and Au Overlayers on Si(111)**, *Surface Science* **178**, Nos. 1-3, 10-16 (1986).

P. Nordlander and P. Avouris (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Structure of Adsorbate Inverse Photoemission Spectra: A Model Hamiltonian Study**, *Surface Science* **177**, No. 2, L1004-L1010 (1986).

O

G. S. Oehrlein, R. G. Schad, and M. A. Jaso (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Mechanism of Silicon Surface Roughening by Reactive Ion Etching**, *Surface and Interface Analysis* **8**, No. 6, 243-246 (1986).

G. Y. Onoda and J. Toner (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Fractal Dimensions of Model Particle Packings Having Multiple Generations of Agglomerates**, *Journal of the American Ceramic Society* **69**, No. 11, 278-279 (1986).

A. Otto (University of Dusseldorf, Dusseldorf, Federal Republic of Germany) and B. Reihl (IBM, Zurich, Switzerland), **Eels, Inverse and Direct Photoemission of Pyrazine in Ag(111)**, *Surface Science* **178**, No. 1-3, 635-645 (1986).

P

P. Pan (IBM Corporation, P.O. Box A, Essex Junction, VT 05452), **Characteristics of Thermal SiO₂ Films During Nitridation**, *Journal of Applied Physics* **61**, No. 1, 284-293 (1987).

S. T. Pantelides (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Defects in Amorphous Silicon: A New Perspective**, *Physical Review Letters* **57**, No. 23, 2979-2982 (1986).

B. D. Patterson, H. Baumeler, H. Keller, R. F. Kiefl, W. Kundig, W. Odermatt, J. W. Schneider (University of Zurich, Schonberggasse 9, CH-8001 Zurich, Switzerland), W. J. Choyke (Westinghouse Electric Corp., Pittsburgh, PA), T. L. Estle, D. P. Spencer (Rice University, Houston, TX), K. W. Blazey (IBM, Yorktown Heights, NY), and I. M. Slavic (FAC Natural & Mathematical Science, Belgrade, Yugoslavia), **Muonium States in Silicon Carbide**, *Hyperfine Interactions* **32**, No. 1-4, 625-630 (1986).

H. E. Pfnur, C. T. Rettner, J. Lee, R. J. Madix, and D. J. Auerbach (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Dynamics of the Activated Dissociative Chemisorption of N₂ on W(110): A Molecular Beam Study**, *Journal of Chemical Physics* **85**, No. 12, 7452-7466 (1986).

P. Pistor (IBM Deutschland GmbH, Tiergartenstrasse 15, D-6900 Heidelberg, Federal Republic of Germany) and R. Traunmueller (Johannes Kepler University, Linz, Austria), **A Database Language for Sets, Lists, and Tables**, *Information Systems* **11**, No. 4, 323-336 (1986).

D. W. Pohl (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Dynamic Piezoelectric Translation Devices**, *Review of Scientific Instruments* **58**, No. 1, 54-57 (1987).

H. Poppa (IBM Corporation, 650 Harry Road, San Jose, CA 95120), C. A. Papageorgopoulos, and E. Bauer (NASA Ames Research Center, Moffett Field, CA), **The Low-Rate Growth of Particulate Fe on Planar Alumina Supports**, *Ultramicroscopy* **20**, No. 1/2, 145-150 (1986).

A. J. Posocco (IBM Corporation, 1701 North Street, Endicott, NY 13760), **A Method of Measuring Plating Thickness on an Irregular Surface**, *Plating and Surface Finishing* **73**, No. 11, 24 (1986).

R. B. Prime (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) and J. C. Seferis (University of Washington, Seattle), **Thermo-Oxidative Decomposition of Poly (Ether Ether Ketone)**, *Journal of Polymer Science-Polymer Letters* **24**, No. 12, 641-644 (1986).

R

J. D. Reid and A. P. David (IBM Corporation, 1701 North Street, Endicott, NY 13760), **Effects of Polyethylene Glycol on the Electrochemical Characteristics of Copper Cathodes in an Acid Copper Medium**, *Plating and Surface Finishing* **74**, No. 1, 66-70 (1987).

K. H. Rieder and W. Stocker (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Hydrogen-Induced Subsurface Reconstruction of Cu(110)**, *Physical Review Letters* **57**, No. 20, 2548-2551 (1986).

D. Rieger, F. J. Himpsel, U. O. Karlsson, F. R. McFeely, J. F. Morar, and J. A. Yarmoff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electronic Structure of the CaF₂/Si(111) Interface**, *Physical Review B* **34**, No. 10, 7295-7306 (1986).

J. Rissanen (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Predictive and Non-Predictive Minimum Description Length Principles**, *Lecture Notes in Control and Information Sciences* **86**, 115-140 (1986).

D. B. Robbins (IBM Corporation, White Plains, NY 10604), **The Psychiatric Patient at Work**, *Occupational Medicine* **1**, No. 4, 549-558 (1986).

B. E. Rogowitz (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Practical Guide to Flicker Measurement: Using the Flicker-Matching Technique**, *Behavior & Information Technology* **5**, No. 4, 359-373 (1986).

R. J. Rosser (State University of New York, Stony Brook, NY 11794), R. Feder (IBM, Yorktown Heights, NY), A. Ng, F. Adams (UBC, Vancouver, Canada), M. Caldarolo (IBM, Yorktown Heights, NY), P. Celliers (UBC, Vancouver, Canada), P. C. Cheng (IBM, Yorktown Heights, NY), L. Desilva, D. Parfeniu (UBC, Vancouver, Canada), and R. J. Speer (Imperial College, London, England), **Biological Specimens Imaged by Soft-X-Ray Contact Microscopy Using a Plasma Source Produced with a Laboratory Sized Laser**, *Journal of Microscopy* **144**, Part 2, RP5-RP6 (1986).

J. R. Rozen and D. D. Awschalom (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Low Temperature Magnetic Spectroscopy with a dc SQUID**, *Applied Physics Letters* **49**, No. 24, 1649-1651 (1986).

S. M. Rump (IBM Germany, Schonaicher Street 220, D-7030 Boeblingen, Federal Republic of Germany), **New Results on Verified Inclusions**, *Lecture Notes in Computer Science* **235**, 31-69 (1986).

B. A. Rupp and S. E. Taylor (IBM Corporation, 555 Bailey Avenue, San Jose, CA 95150), **Retinal Adaptation to Non-uniform Fields: Average Luminance or Symbol Luminance?**, *Behavior & Information Technology* **5**, No. 4, 375-379 (1986).

S

C. Saito (IBM, Japan Ltd., Tokyo, Japan), H. Amano, T. Kudoh, and H. Aiso (Keio University, Tokyo, Japan), **An Adaptable Cluster Structure of (SM)2-11**, *Lecture Notes in Computer Science* **237**, 53-60 (1986).

J. L. C. Sanz (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and I. Dinstein (Ben Gurion University, Beer-Sheva, Israel), **Projection-Based Geometrical Feature Extraction for Computer Vision: Algorithms in Pipeline Architectures**, *IEEE Transactions on Pattern Analysis and Machine Intelligence PAMI-9*, No. 1, 160-168 (1986).

S. E. Savas, D. E. Horne, and R. W. Sadowski (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Dummy Load Technique for Power Efficiency Estimation in RF Discharges**, *Review of Scientific Instruments* **57**, No. 7, 1248-1250 (1986).

L. B. Schein, A. Rosenberg, and S. L. Rice (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Hole Transport in a Molecularly Doped Polymer: p-Diethylaminobenzaldehyde-Diphenyl Hydrazone in Polycarbonate**, *Journal of Applied Physics* **60**, No. 12, 4287-4292 (1986).

Z. Schlesinger, W. I. Wang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and A. H. MacDonald (National Research Council of Canada, Ottawa), **Dynamical Conductivity of the GaAs Two-Dimensional Electron Gas at Low Temperature and Carrier Density**, *Physical Review Letters* **58**, No. 1, 73-76 (1987).

J. W. Schneider, H. Baumeler, H. Keller, R. F. Kiefl, W. Kundig, W. Odermatt, B. D. Patterson (University of Zurich, Schonberggasse 9, CH-8001 Zurich, Switzerland), T. L. Estle, S. P. Rudaz (Rice University, Houston, TX), K. W. Blazey (IBM, Yorktown Heights, NY), and C. Schwab (University of Strasbourg, Strasbourg, France), **Muonium States in Zincblende Structured Compounds**, *Hyperfine Interactions* **32**, No. 1-4, 607-612 (1986).

L. S. Schulman and P. E. Seiden (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Hierarchical Structure in the Distribution of Galaxies**, *Astrophysical Journal* **311**, No. 1, Part I, 1-5 (1986).

W. Sesselmann, E. E. Marinero, and T. J. Chuang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Laser Stimulated Desorption from Noble Metal Surfaces Reacted with Chlorine**, *Surface Science* **178**, No. 1-3, 787-797 (1986).

L. T. Shi and W. Krakow (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Orientational Ordering Induced by Shear Deformation in an Amorphous Lennard Jones Solid**, *Physical Review B* **34**, No. 10, 7407-7409 (1986).

T. W. Shield, D. B. Bogy (University of California, Berkeley, CA 94720), and F. E. Talke (IBM, San Jose, CA), **A Numerical Comparison of One-Dimensional Fluid Jet Models Applied to Drop-on-Demand Printing**, *Journal of Computational Physics* **67**, No. 2, 327-347 (1986).

B. D. Silverman, J. W. Bartha, J. G. Clabes, P. S. Ho (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and A. R. Rossi (University of Connecticut, Storrs), **Molecular Orbital Analysis of the XPS Spectra of PMDA-ODA Polyimide and Its Polyamic Acid Precursor**, *Journal of Polymer Science-Polymer Chemistry* **24**, No. 12, 3325-3333 (1986).

V. J. Silvestri (IBM Corporation, East Fishkill facility, Hopewell Junction, NY 12533), **Growth Kinematics of a Polysilicon Trench Refill Process**, *Journal of the Electrochemical Society* **133**, No. 11, 2374-2376 (1986).

P. M. Solomon, S. L. Wright, and D. La Tulipe (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Probe Pressure Effect on Tunneling Current Through a GaAs-(Al,Ga)As-GaAs Heterojunction Barrier**, *Applied Physics Letters* **49**, No. 21, 1453-1455 (1986).

D. Sondericker, F. Jona (State University of New York, Stony Brook, NY 11794), and P. M. Marcus (IBM, Yorktown Heights, NY), **Atomic Structure of Alloy Surfaces II. Ni₃Al(111)**, *Physical Review B* **34**, No. 10, 6770-6774 (1986).

D. Sondericker, F. Jona (State University of New York, Stony Brook, NY 11794), and P. M. Marcus (IBM, Yorktown Heights, NY), **Atomic Structure of Alloy Surfaces III. Ni₃Al(110)**, *Physical Review B* **34**, No. 10, 6775-6778 (1986).

H. Sontag and A. C. Tam (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Characterization of Vapor and Aerosol Flows by Photothermal Methods**, *Canadian Journal of Physics* **64**, No. 9, 1121-1123 (1986).

H. Sontag and A. C. Tam (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Optical Detection of Photoacoustic Pulses in Thin Silicon Wafers**, *Canadian Journal of Physics* **64**, No. 9, 1330-1333 (1986).

G. J. Sprokel (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Photoelastic Modulated Ellipsometry on Magneto-Optic Multilayer Films**, *Applied Optics* **25**, No. 22, 4017-4022 (1986).

R. Srinivasan, B. Braren, and R. W. Dreyfus (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Ultraviolet Laser Ablation of Polyimide Films**, *Journal of Applied Physics* **61**, No. 1, 372-376 (1987).

J. A. Strosio, R. M. Feenstra, and A. P. Fein (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Electronic Structure of the Si(111)2×1 Surface by Scanning-Tunneling Microscopy**, *Physical Review Letters* **57**, No. 20, 2579–2582 (1986).

J. Y.-C. Sun, Y. Taur, R. H. Dennard, and S. P. Klepner (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Submicrometer-Channel CMOS for Low-Temperature Operation**, *IEEE Transactions on Electron Devices* **ED-34**, No. 1, 19–27 (1987).

G. S. Sur (University of Cincinnati, Cincinnati, OH 45221) and J. E. Mark (IBM, San Jose, CA), **Comparison Among Some Tetraalkoxysilanes in the Hydrolytic Precipitation of Silica into Elastomeric Networks**, *Makromolekulare Chemie* **187**, No. 12, 2861–2866 (1986).

T

A. C. Tam and G. Ayers (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Ultrasonic Imaging of Layered Structures Utilizing Nondestructive Subnanosecond Photoacoustic Pulse Generation**, *Applied Physics Letters* **49**, No. 21, 1420–1422 (1986).

A. C. Tam and H. Sontag (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Measurement of Air Gap Thickness Underneath an Opaque Film by Pulsed Photothermal Radiometry**, *Applied Physics Letters* **49**, No. 26, 1761–1763 (1986).

S. I. Tan, R. Lane, and D. B. Dove (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Infrared Imaging Study of Print Head Temperatures Occurring During Resistive Ribbon Thermal Transfer Printing**, *Optical Engineering* **25**, No. 11, 1217–1221 (1986).

D. D. Tang, F. F. Fang, M. Scheuermann, and T. C. Chen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Time-of-Flight Measurements of Minority Carrier Transport in P-Silicon**, *Applied Physics Letters* **49**, No. 22, 1540–1541 (1986).

W. V. Tang (IBM Corporation, Rochester, MN 55901), **ISDN—New Vistas in Information Processing**, *IEEE Communications Magazine* **24**, No. 11, 11–16 (1986).

Z. Tešanović, M. V. Jarić (Harvard University, Cambridge, MA 02138), and S. Maekawa (IBM, Yorktown Heights, NY), **Quantum Transport and Surface Scattering**, *Physical Review Letters* **57**, No. 21, 2760–2763 (1986).

T. N. Theis, B. D. Parker, P. M. Solomon, and S. L. Wright (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Hot Electron Capture to DX Centers in Al_xGa_{1-x}As at Low Al Mole Fractions**, *Applied Physics Letters* **49**, No. 22, 1542–1544 (1986).

A. Thomasian (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and P. F. Bay (TRW Operations and Support Group, Redondo Beach, CA), **Analytic Queueing Network Models for Parallel Processing of Task Systems**, *IEEE Transactions on Computers* **C-35**, No. 12, 1045–1054 (1986).

G. Timp, A. B. Fowler, A. Hartstein (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and P. N. Butcher (University of Warwick, Midlands, England), **Hopping Conduction in a Two-Dimensional Impurity Band**, *Physical Review B* **34**, No. 12, 8771–8785 (1986).

C. Y. Ting, F. M. d'Heurle, S. S. Iyer, and P. M. Fryer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **High Temperature Process Limitation on TiSi₂**, *Journal of the Electrochemical Society* **133**, No. 12, 2621–2625 (1986).

J. C. Tsang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Symmetry Forbidden Raman Scattering from (100) Surfaces of Oxidized Si and Ge**, *Applied Physics Letters* **49**, No. 26, 1796–1798 (1986).

V

M. Y. Vardi (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Querying Logical Databases**, *Journal of Computer and Systems Sciences* **33**, No. 2, 142–160 (1986).

W

O. C. Wells (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and C. A. Stoye (Oxford, England), **Relationship Between Type-I Magnetic Contrast in the Scanning Electron Microscope and the Vector Potential of the Magnetic Field**, *Journal of Microscopy* **144**, Part I, RP1–RP4 (1986).

C. C. Williams and H. K. Wickramasinghe (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Scanning Thermal Profiler**, *Applied Physics Letters* **49**, No. 23, 1587–1589 (1986).

C. E. Williams (Université Paris-Sud, Orsay, France), T. P. Russell (IBM, San Jose, CA), R. Jerome, and J. Horison (University of Liège, Liège, Belgium), **Ionic Aggregation in Model Ionomers**, *Macromolecules* **19**, No. 11, 2877–2884 (1986).

M. Wittmer, J. T. Wetzel, and P. A. Psaras (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Solute Effect of Arsenic on the Microstructure and Diffusion Mechanism in Platinum Silicides**, *Philosophical Magazine B* **54**, No. 5, 359–379 (1986).

J. C. S. Woo, J. D. Plummer (Stanford University, Stanford, CA 94305), and J. M. C. Stork (IBM, Yorktown Heights, NY), **Non-Ideal Base Current in Bipolar Transistors at Low Temperatures**, *IEEE Transactions on Electron Devices* **ED-34**, No. 1, 130–138 (1987).

R. W. Wood (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Magnetic Recording Systems**, *Proceedings of the IEEE* **74**, No. 11, 1557–1569 (1986).

S. L. Wright, R. F. Marks, S. Tiwari, T. N. Jackson, and H. Baratte (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **In Situ Contacts to GaAs Based on InAs**, *Applied Physics Letters* **49**, No. 22, 1545–1547 (1986).

Y

H. Yokouchi (IBM Japan Ltd., 5-19 Sanban-cho, Chiyoda-ku, Tokyo 102, Japan), **Retraction Map Categories and Their Applications to the Construction of Lambda Calculus Models**, *Information and Control* **71**, Nos. 1/2, 33–86 (1986).

Z

R. W. Zmud, A. C. Boynton (University of North Carolina, Chapel Hill, NC 27514), and G. C. Jacobs (IBM, Research Triangle Park, NC), **The Information Economy: A New Perspective for Effective Information-Systems Management**, *Data Base* **18**, No. 1 (1986).